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**The parent-child similarity in cross-group friendship and anti-immigrant prejudice: A study among 15-year adolescents and both their parents in Belgium**

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**Abstract**

The aim of this article was to investigate the relation between parental cross-group friendships and the anti-immigrant prejudice of their children. It was hypothesized that this relation can be mediated by two intergenerational transmission mechanisms: (1) via parent-child similarity in prejudice, and (2) via parent-child similarity in crossgroup friendship. Data from the Parent-Child Socialization Study (2012), a representative sample among adolescents and both their parents in Belgium, were used. Controlling for the mediating mechanisms, no direct relationship between parental cross-group friendship and adolescents' prejudice was found. Parental cross-group friendships was, however, indirectly related via parent-child anti-immigrant prejudice and cross-group friendship similarity. Cross-group friendship similarity is an important mechanism and can not only found in families having stronger values of tolerance.

## **The parent-child similarity in cross-group friendship and anti-immigrant prejudice: A study among 15-year adolescents and both their parents in Belgium**

### **1. Introduction**

Adolescence is a time in which basic democratic norms such as tolerance and equality are shaped and acquired (Flanagan, 2013; Hooghe, 2004; Niemi & Hepburn, 1995). Previous research has indeed indicated that adolescents already have well-defined opinions about different minority groups in society and that these opinions remain rather stable when entering adulthood (Hooghe & Wilkenfeld, 2007; Miller & Sears, 1986). Whereas individual-based personality traits are important predictors of intergroup attitudes, authors in the field of socialization assume that intergroup attitudes like prejudice are learned within a given social context during the formative adolescent years (e.g. Allport, 1954). In general, it could be argued that personality is embedded in a social context, and a full understanding of the role of personality in the development of prejudice at least requires an adequate consideration of social determinants.

In this article, I argue that the home environment is a crucial aspect of this social context and provides important foundations for attitude and behavior development. Family members are found to have a considerable impact on each other's feelings of prejudice through the system of intergenerational transmission and similarity (Degner & Dalege, 2013; O'Bryan, Fishbein, & Ritchey, 2004; Rodríguez-García & Wagner, 2009). While previous research has mostly been directed toward the intergenerational similarity in prejudice, "i.e. an attitude", less attention has been devoted to parent-child similarity in intergroup contact, "i.e. a situational experience" (Allport, 1954; Degner & Dalege, 2013). While both the attitudinal and situational component obviously interact, it is odd to find little research disentangling both mechanisms, since it is known that intergroup experiences can more easily be observed and imitated than intergroup attitudes (Bandura, 1977).

Recent research efforts (e.g. Dhont & Van Hiel, 2012; Rodríguez-García & Wagner, 2009; White et al., 2009) have tried to integrate the intergroup experiences in the attitude transmission model by including intergroup contact as a moderator in the prejudice transmission model. Dhont and Van Hiel (2012) and Rodríguez-García and Wagner (2009) argue that adolescents with positive intergroup contact experiences rely more on these personal experiences than on their parents' intergroup attitudes, reducing parent-child similarity in prejudice. As such, they conclude that adolescents' intergroup contact experiences function as a buffer against the intergenerational similarity in prejudice.

In addition to the work of Dhont and Van Hiel (2012) and Rodríguez-García and Wagner (2009), I emphasize that intergroup contact experience – as is the case for prejudice – is embedded in the family context and can also related between parents and children. As such, intergroup contact cannot only be seen as a buffer against the intergenerational similarity in prejudice, but also as part of the learning process within the family. Therefore, this article will investigate parent-child similarity in prejudice and intergroup contact experiences by including 'parental intergroup contact experiences' (here measured as cross-group friendship) in the transmission model. I hypothesize that parental cross-group friendship is directly related to the level of prejudice of the children and that this direct relationship is mediated by two transmission mechanisms: (1) via parent-child cross-group friendship similarity; and (2) via parent-child prejudice similarity. In other words, relying on the contact hypothesis, I will examine whether parent-child cross-group friendship similarity can only be found in families having stronger values of tolerance or whether it is a separate mechanism of intergroup experience transmission, independent of attitudinal similarity.

Prejudice can be directed toward different outgroups, as long as it includes feelings of dislike toward that specific outgroup, while favoring one's own ingroup (Brown & Zagefka, 2005). In this article, I specifically focus on prejudice toward immigrants, as this minority group is often subject to negative attitudes, stereotypes and discriminatory behavior in Western Europe (Davidov, Meuleman, Billiet, & Schmidt, 2008).

Empirically, this article contributes by making use of the Parent-Child Socialization Study 2012, a new representative survey of 3,426 15-year old adolescents and both their parents. This survey was especially designed to overcome methodological shortcomings of other transmission research (Hughes et al., 2006): questionnaires were distributed among a

representative adolescent sample and both their parents so that direct measures were obtained from mother *and* father. These data allow to explore cross-group friendship similarity, independent of prejudice similarity.

## 2. Literature

### 2.1 *Anti-immigrant prejudice in Belgium*

Most of the contemporary definitions of prejudice still go back to the traditional conceptualization by Adorno, Frenkel-Brunswick, Levinson, and Sanford (1950) in 'The Authoritarian Personality' and Allport (1954) in 'The Nature of Prejudice'. Adorno and his colleagues defined prejudice as 'feelings of dislike against a specific group' and distinguished it from ethnocentrism which was defined as "a general rejection of outgroups" (p. 102). For Allport, prejudice is a "hostile attitude toward a person who belongs to a group, simply because he belongs to that group, and is therefore presumed to have the objectionable qualities ascribed to the group" (p. 8). In this article, prejudice is defined as a negative attitude toward *a specific* group or towards members of the group (Stangor, 2009). As such, different forms of prejudice can be distinguished: e.g. anti-immigrant prejudice, sexual prejudice, ethnic prejudice, anti-Muslim prejudice. In this article, specific focus is put on anti-immigrant prejudice, as prejudice in Belgium is most often directed toward this group (Dejaeghere, Hooghe, & Claes, 2012).

Like other Western European countries, Belgium has become increasingly diverse during the past decades. According to OECD data, 15% of the total population is foreign-born which is somewhat above the OECD average of 12.5% (OECD, 2013). In the last ten years, migration rates increased more rapidly in Belgium than in the neighboring countries like the Netherlands, Germany and France (National Institute for Statistics, 2010). Since 2008, the most common countries of origin are Morocco, France, the Netherlands and Italy (OECD, 2013).

Research has pointed out that native Belgians perceive ethnic minorities and immigrants as persons with non-EU roots, mostly belonging to the Maghreb Arabic community and Turkey (Centre for Equal Opportunities and Opposition to Racism, 2009). Meuleman, Davidov, and Billiet (2009) found that the levels of anti-immigrant prejudice in Belgium are not significantly different from the European average. Although it is often assumed that Belgium is a diverse country because of the presence of Dutch and French language groups, in practice both language groups are strongly segregated, with the Dutch-speaking group in the north of the country, and the French-speaking group in the south of the country. For all practical purposes, therefore, the linguistic division of the country does not contribute to the experience of diversity of most inhabitants of Belgium (Deschouwer, 2009).

### 2.2 *Family socialization and intergroup contact*

An extensive body of research has investigated the determinants and predictors of prejudice and intergroup relations in adolescence. Broadly, two approaches can be distinguished: an individual-based and a social experience approach. The individual-based approach mainly focusses on correlates within the person like personality factors, while the social experience approach emphasizes situational and contextual factors (Akrami, Ekehammar, Bergh, Dahlstrand, & Malmsten, 2009). More recently, an interactionist perspective has been suggested, combining both theoretical stances (e.g. Duckitt & Sibley, 2010). The argument is that personality and social factors are mutually dependent and that the combination of both defines how prejudice is constructed. While personality traits are important determinants of prejudice, in this article I only focus on two central social experiences in adolescence: family socialization and intergroup contact, that also shape personality characteristics.

In his seminal work, Allport (1954) emphasized that children acquire prejudice by being part of a certain social environment: "No child is born prejudiced... the context of his learning is always the social structure in which his personality develops" (Allport, 1954, p. 324). In this social context, prejudice is shaped by means of social learning, conformity and intergroup contact (Aboud, 2006). With the concept of 'intergenerational transmission' I refer to the social learning and conformity mechanisms in which family members are judged to be the most influential role models for their children. On the



one hand, because parents are often the first and principal source of information, children tend to imitate and conform to the explicit attitudes and behaviors of their parents. Recently, it has been found that even the nonverbal behavior (e.g. avoidance of eye contact) of parents interacting with outgroups can be picked up by very young children (Castelli, De Dea, & Nesdale, 2008). On the other hand, parents can actively engage in transmitting intergroup attitudes by creating learning environments in which they intentionally teach their children basic social values, norms and behavior.

In the literature on socialization, there is, however, still a debate on the directionality of the transmission process: do parents influence their children, do children influence their parents, or is the influence reciprocal? In their review article on socialization, Knafo and Galansky (2008) emphasize the importance of controlling for different processes of child influence. Children can consciously or unconsciously change their parents values in a direction similar or even opposite to their own values. Moreover, child influences seem to occur mainly in families with authoritative parenting patterns (Pinquart & Silbereisen, 2004). Not many authors in this field have addressed this question on the directionality of intergenerational prejudice similarity (except e.g. Rodríguez-García & Wagner, 2009; Vollebergh, Iedema, & Raaijmakers, 2001). Making use of a longitudinal design on ethnocentrism transmission, Vollebergh et al. (2001) found the effects of parents on children to be larger than the effects from children on their parents. Rodríguez-García and Wagner (2009) too found more evidence for the unidirectional transmission model (children resemble their parents) than the bidirectional model. Due to the cross-sectional nature of the data in the present study, no contribution to the directionality of the prejudice transmission process can be made and it is only possible to quantify parent-child *similarity* in anti-immigrant prejudice and cross-group friendship.

The other mechanism, intergroup contact, is experienced within larger social networks in which peers and parents define the social norms. Intergroup contact, and especially cross-group friendship, is cited as one of the most powerful tools for reducing negative attitudes toward the outgroup, and even generalizes to other outgroups who are not involved in the contact (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Pettigrew & Tropp, 2011; Pettigrew, 1997). Cross-group friendship, however, is not the same as cross-group contact, as it involves some form of affective engagement between the in- and outgroup, regular encounters in different situations, and feelings of closeness toward the outgroup (Davies et al., 2011). Therefore, Pettigrew (1997) argues that for contact to reduce prejudice, that contact needs friendship potential. Indeed, in their meta-analysis Davies et al. (2011) found the number of cross-group friendships correlated more strongly with prejudice than did any other operationalization of intergroup contact. Adolescence seems to be the crucial phase in which these cross-group friendships are developed because they serve as a frame of reference for the development of intergroup peer relations (Pettigrew & Tropp, 2011). Moreover, adolescent cross-group friendship networks can even predict reduced levels of prejudice later in life (Hooghe, Meeusen, & Quintelier, 2012; Towles-Schwen & Fazio, 2001).

The contact hypothesis, however, is not without criticism. Relevant for this article, are the critiques with regard to causality and real-life applicability (see Dixon, Durrheim, & Tredoux, 2005; Hewstone & Swart, 2011). First, the contact hypothesis has been challenged for its causal assumption (contact reduces prejudice), as it can also be argued that prejudiced people will be less likely to interact with outgroup members (prejudice reduces contact). However, experimental and longitudinal research (e.g. Binder et al., 2009; Dhont, Van Hiel, De Bolle, & Roets, 2012; Pettigrew, 1997) have shown that intergroup contact reduces prejudice more so than prejudice reduces contact. Nevertheless, causality remains an issue of debate in the contact literature. Since this article is based on cross-sectional data, no causal assumption on the contact hypothesis can be made. Second, Dixon and colleagues (2005) criticize the real-life applicability of the contact hypothesis by arguing that cross-group friendships are still rather uncommon and that contact must always be studied within the broader social context, which is often neglected in contact research. By studying cross-group friendships within the family context, at least one part of the adolescents' social context can be taken into account.

In this article, I argue that both social mechanisms – family socialization and intergroup contact – simultaneously affect the formation of anti-immigrant prejudice in adolescence.

### ***2.3 Intergenerational similarity in prejudice***

Literature on the intergenerational similarity in prejudice is somewhat inconsistent as several authors find convincingly strong intergenerational similarity (e.g. Dhont, Roets, & Van Hiel, 2013; Dhont & Van Hiel, 2012; Jaspers, Lubbers, & de Vries, 2008; O'Bryan et al., 2004; Rodríguez-García & Wagner, 2009), while others find only a limited degree of parent-child correspondence (e.g. Aboud & Doyle, 1996; Hello, Scheepers, Vermulst, & Gerris, 2004; Vittrup & Holden, 2011). In order to systematize the inconsistency in the existing transmission literature, Degner and Dalege (2013) performed a meta-analysis including data from 131 prejudice studies and found an average correlation of .29 between the intergroup attitudes of parents and their children. The authors tested the effect of different moderator variables on this parent-child similarity in intergroup attitudes. With regard to measurement-related and design-specific moderators, they found that studies using children's perception of parental intergroup attitudes and studies with identical attitude measures for parents and children, on average, report higher attitude correspondence. Also, prejudice directed toward immigrants was more effectively transmitted from parent to child than other forms of prejudice (based on gender, race or ethnicity). Sample-specific characteristics as the child's age, gender and social position further moderate the intergenerational similarity. Degner and Delege conclude that a part of the inconsistency in the strength of the parent-child similarity is due to specific sample, measurement and design-related characteristics. Personality and social psychologists, finally, contend that prejudice similarity is rooted in the more fundamental resemblance of personality characteristics like authoritarianism, social dominance and the need for closure (Dhont et al., 2013; Dhont & Van Hiel, 2012; Duriez & Soenens, 2009).

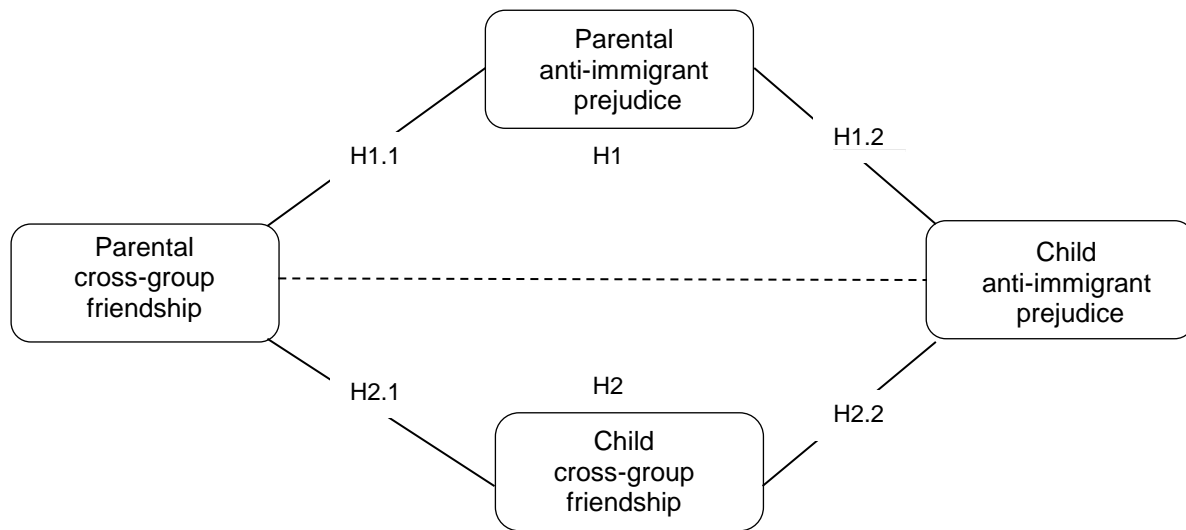
### ***2.4 Intergenerational similarity in cross-group friendship***

Some researchers, however, hypothesize that the inconsistency in transmission studies is partly due to the moderating effect of adolescents' own intergroup contact and friendship experience (Rodríguez-García & Wagner, 2009). Personal intergroup experiences provide adolescents with direct information about the outgroup which can reduce feelings of anxiety toward that outgroup, and in turn, promote tolerance (Brown & Hewstone, 2005; Pettigrew & Tropp, 2011). As a consequence, adolescents with intergroup friendship networks will rely less on the cues provided by their parents and parent-child similarity in prejudice will be lower. This way, intergroup friendship functions as a buffer against negative parental intergroup messages (Crystal, Killen, & Ruck, 2008; Dhont & Van Hiel, 2012; Edmonds & Killen, 2009; Rodríguez-García & Wagner, 2009; Towles-Schwen & Fazio, 2001).

In line with the above mentioned authors, I agree that it is valuable to include intergroup contact in the transmission model in order to understand how prejudice is developed and to evaluate the relative position of parent-child attitude similarity. However, I argue that the friendship-as-buffer mechanism does not provide the whole picture on contact and prejudice similarity, as it can easily be argued that the adolescents' intergroup experiences are related to the parents as well. Therefore, as suggested by Dhont and Van Hiel (2012, p. 234), I elaborate on previous literature by investigating parent-child similarity in cross-group friendship itself and by evaluating the relation between parental intergroup experiences and adolescents' prejudice. As such, I contend that parental cross-group friendship experience is related to adolescents' prejudice and that this relationship can be explained by the mediating mechanisms of intergenerational transmission as visualized in Figure 1: (1) parental cross-group friendship is related to parental prejudice (H1.1), and parental prejudice is related to the child's level of prejudice (H1.2), i.e. parental cross-group friendship is indirectly related to the level of prejudice of the child via attitude similarity (H1); (2) the cross-group friendship experiences of the parents are related to the cross-group friendship experiences of the child (H2.1), and cross-group friendship experiences of the child are related to feelings of prejudice (H2.2), i.e. parental cross-group friendship is indirectly related to the level of prejudice of the child via cross-group friendship similarity (H2).



Figure 1. Theoretical model of parent-child similarity in prejudice and cross-group friendship



While considerable research attention has been devoted to parent-child similarity in prejudice, at present, correspondence in cross-group friendship experience is rather unexplored. There is, however, no reason to believe that patterns of intergroup contact and friendship are not related within families, and as such, that intergroup contact similarity can influence the level of prejudice of the adolescents. Edmonds and Killen (2009) interpret this mechanism in terms of the four contact conditions as specified by Allport: equal status, common goals, intergroup cooperation, and support of authorities. The authors maintain that parents are authoritative actors in the adolescent’s life who need to approve their cross-group relationships. When parents have intergroup friends, children will be “better adjusted and socially competent” to engage in intergroup relations themselves (Edmonds & Killen, 2009, pp. 7–8).

Another explanation for the relationship between parental and adolescents’ cross-group friendship can be found in the indirect or extended contact literature (Pettigrew, Christ, Wagner, & Stellmacher, 2007; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). The extended contact hypothesis states that merely knowing ingroup members who have outgroup friends diminishes prejudice. This extended contact effect can be explained by means of intergroup anxiety and perceived ingroup norms (Gómez, Tropp, Fernández, 2011; Turner, Hewstone, Voci, & Vonofakou, 2008).<sup>1</sup> Knowing that an ingroup member positively interacts with an outgroup member can reduce anxiety about future interactions with the outgroup and can lead to the perception that interacting with the outgroup is accepted by the ingroup. So, by having cross-group friends, family members can reduce each other’s intergroup anxiety and provide information about ingroup norms regarding interaction with outgroups, especially since Tausch, Hewstone, Schmid, Hughes, and Cairns (2011) found that extended contact via intimate ingroup members, like family members, are the most effective. Hence, I hypothesize that *parental cross-group friendship is indirectly related to the level of prejudice of the children via cross-group friendship similarity*. To test this hypothesis, it is important to control for the broader social environment in which parents and children live, as families living in diverse neighborhoods have a higher likelihood to meet people with another ethnic background (Killen, Kelly, Richardson, Crystal, & Ruck, 2010; Vanhoutte & Hooghe, 2012).

The second mediating mechanism relies on the combination of the contact hypothesis and the intergenerational transmission literature. The contact hypothesis predicts that parents with cross-group friendships will be less prejudiced than parents without cross-group friendships. In turn, because of the intolerant norm setting at home, a direct association between

the prejudice of the parents and the prejudice of the children is expected. I thus hypothesize that *parental cross-group friendship is indirectly related to the level of prejudice of the children via prejudice similarity*.

### 3. Data and Methods

#### 3.1 Data

To assess the parent-child similarity in anti-immigrant prejudice and cross-group friendship, I make use of the Parent-Child Socialization Study (PCSS) (Hooghe, Quintelier, Verhaegen, Boonen, & Meeusen, 2012). This study was conducted in the Spring of 2012 and included 3,426 15-year old adolescents and both their parents. Based on educational track (general, technical, artistic and vocational education) and province (five Flemish provinces and Brussels Capital), a sample of 61 schools was selected in the Dutch-speaking region of Belgium.<sup>2</sup> During class hours, the adolescents filled in a self-administered questionnaire which was supervised by professional researchers. The purpose of the study was to collect representative data on social and political attitudes, political participation, voting behavior, socio-demographic characteristics, family situation, and parent-child relationship. Comparing the sample to population statistics revealed that the composition of the adolescent sample in the PCSS is a representative reflection of the 15-year old Flemish population. However, because of the small overrepresentation of boys in technical education and the small underrepresentation of boys in vocational and girls in technical education, weights based on gender and education track are applied in all analyses. The weights ranged between .650 and 1.220.

The PCSS was especially designed to collect direct measures from both parents. For this purpose, the adolescents were handed a similar questionnaire for both their mother and father. The parents were asked to fill out the survey and to send it back to the university in a pre-stamped envelope. After two reminders (by mail and/or by phone), 67% of the mothers and 61% of the fathers returned the questionnaire. There is full information for 2,085, or 61% mother-father-child triads. Because the dependent variable is anti-immigrant prejudice (see 3.2), I only included the adolescents that belong to the majority group in Belgium, i.e. adolescents whose both parents were born in Belgium. As a consequence, 309 mother-father-child triads (15%) were deleted, resulting in a sample of 1,708 triads.<sup>3</sup> The majority group respondents are mainly Catholic (61%) or non-religious (31%), and a small minority is Muslim (6.5%).

#### 3.2 Measurement

*Anti-immigrant prejudice.* The PCSS includes a four-point Likert scale (1=Completely disagree, 4=Completely agree) with eight items tapping the respondents' prejudice toward the presence of immigrants. Some typical examples of the items are 'If a country wants to reduce tension it should stop immigration' and 'The presence of immigrants increases criminality in our country'. Some items were reversed so that higher values indicate more prejudice toward immigrants. To avoid false consensus bias caused by relying on adolescent's perceptions, anti-immigrant attitudes were directly obtained from mother, father and child. Also, conceptual overlap between parents and children was assured by using exactly the same items in both questionnaires (Degner and Dalege, 2013). Exploratory factor analysis indicated that the responses of mothers and fathers could not be summarized in one single prejudice scale, as the results yielded a two factor solution (eigenvalues 6.383 and 2.445, oblique rotation). Therefore, it was decided to estimate separate models for the transmission by father and mother. Although not the main purpose of the article, this allows to detect possible differences between the parents.<sup>4</sup> A confirmatory factor analysis indicated that the items were a good one-dimensional operationalization of anti-immigrant prejudice among adolescents ( $\alpha=.861$ ,  $X^2=135$ ,  $df=19$ ,  $p<.001$ ,  $RMSEA=.060$ ,  $CFI=.976$ ,  $TLI=.965$ ), mothers ( $\alpha=.881$ ,  $X^2=111$ ,  $df=18$ ,  $p<.001$ ,  $RMSEA=.055$ ,  $CFI=.984$ ,  $TLI=.976$ ), and fathers ( $\alpha=.883$ ,  $X^2=178$ ,  $df=19$ ,  $p<.001$ ,  $RMSEA=.070$ ,  $CFI=.971$ ,  $TLI=.961$ ).<sup>5</sup>

*Cross-group friendship.* Intergroup contact was operationalized as cross-group friendship behavior (Paolini, Hewstone, Cairns, & Voci, 2004; Pettigrew, 1997). While cross-group friendship can be measured in multiple ways, most studies use the number or proportion of outgroup friends as reported by the respondents (Pettigrew & Tropp, 2011). Similarly, in the PCSS both parents and children had to indicate how many of their close friends have a different origin than their own (i.e. Belgian ancestry) (1=None, 2=Almost nobody, 3=A few, 4=Half, 5=Many, 6=Almost all, 7=All of them). Because I deleted all





respondents with at least one parent not born in Belgium from the sample, the distribution of cross-group friendship was skewed to the left. Therefore, the last four categories were merged, which resulted in a new distribution of cross-group friendship: 1=None, 2=Almost nobody, 3=A few, 4=At least half.

*Control variables.* Contrary to previous research on the transmission of prejudice (e.g. Dhont & Van Hiel, 2012; Rodríguez-García & Wagner, 2009), I included some important control variables. Because the similarity in prejudice and cross-group friendships can be affected by the fact that children and parents share the same socio-economic background, I control for the education level of the parents (1=Primary education, 2=Lower secondary education, 3=Higher secondary education, 4=Higher non-university education, 5=University education) and the education track of the child (General, Technical, Artistic, and Vocational education<sup>6</sup>) (Vollebergh et al., 2001). Similarly, because the correspondence in cross-group friendship can be the result of a shared social network between adolescents and their parents, it is important to control for classroom diversity (Pettigrew et al., 2007). Adolescents were asked to indicate how many of their classmates were of different origin (1=None, 2=Almost nobody, 3=A few, 4=At least half).<sup>7</sup>

## 4. Results

### 4.1 Preliminary analysis

In Table 1 (and Table A.1 in Appendix A for control variables) some descriptive and bivariate statistics are provided. With regard to anti-immigrant prejudice, children tend to be more tolerant than their mother ( $p_{t-test}=.018$ ) and their father ( $p_{t-test}<.001$ ). No significant mean difference was found between the prejudice of mothers and fathers ( $p_{t-test}=.301$ ). While children are more tolerant toward immigrants, they report less cross-group friendships than their mother ( $p_{t-test}<.001$ ) and father ( $p_{t-test}<.001$ ).

The Pearson correlations suggest convincing parent-child similarity in anti-immigrant prejudice: prejudiced children seem to have prejudiced parents. Although to a smaller extent, the correlational analysis indicates significant similarity of cross-group friendship between child-mother and child-father as well. Also, parents seem to be quite similar in their anti-immigrant attitudes and their cross-group friendship network. Further, significant relations were found between parental cross-group friendship experiences and adolescents' anti-immigrant prejudice. In the next paragraphs, the two mediating hypotheses are tested.



Table 1. Descriptive statistics and Pearson correlations

	Mean (SD)	Range	N	1.	2.	3.	4.	5.	6.
1. Adolescent anti-immigrant prejudice	2.73 (.31)	1-4	1,708	-	.362***	.332***	-.177***	-.106***	-.081**
2. Mother anti-immigrant prejudice	2.78 (.29)	1-4	1,708		-	.502***	-.016ns	-.277***	-.176***
3. Father anti-immigrant prejudice	2.81 (.32)	1-4	1,708			-	-.057*	-.152***	-.278***
4. Adolescent cross-group friendship	1.84 (.79)	1-4	1,697				-	.120***	.099***
5. Mother cross-group friendship	1.97 (.72)	1-4	1,689					-	.296***
6. Father cross-group friendship	2.07 (.84)	1-4	1,694						-

Note. Means and SD based on sum-scales of anti-immigrant prejudice. Pearson correlations based on measurement model of anti-immigrant prejudice. Ns=non-significant. \*p<0.05; \*\*p<0.01; \*\*\*p<0.001. Source: PCSS 2012.

#### ***4.2 Relation between parental cross-group friendship and adolescent prejudice***

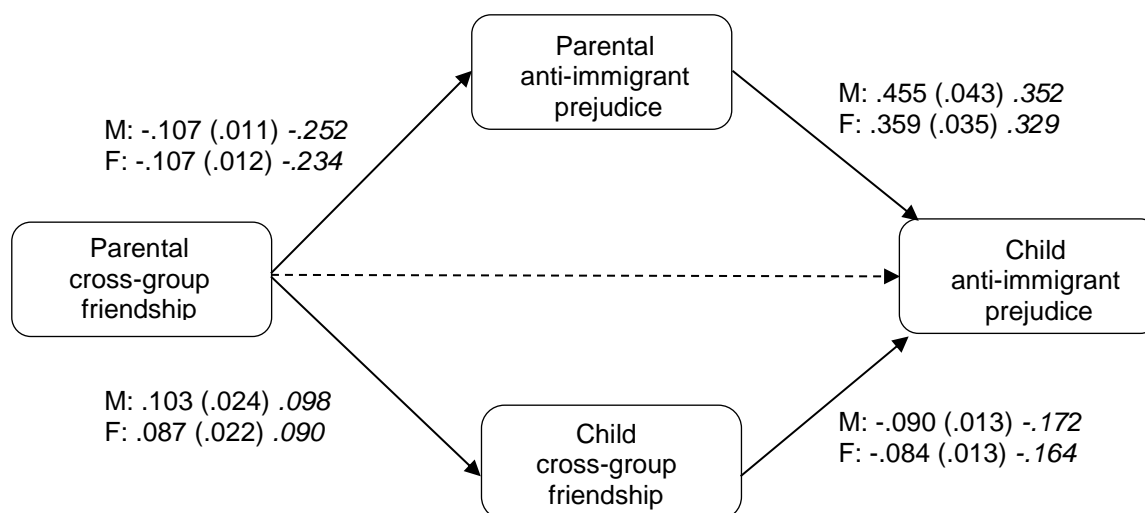
It must be emphasized that due to the cross-sectional nature of the data, no causal specifications can be made. As such, all analyses are correlational in nature. For the remaining analysis, I control for gender, education level parents, education track adolescents and classroom diversity. Also, the mediating model takes into account the measurement model of anti-immigrant prejudice (see Figure B.1 in Appendix B). The parameters presented in Figure 2 are standardized and unstandardized coefficients based on a Maximum Likelihood estimation with Mplus 7. The full model is presented in Table 2.

First, it was hypothesized that the relationship between parental cross-group friendship and adolescent anti-immigrant prejudice could be mediated by parent-child similarity in prejudice (H1). Notwithstanding the rather crude measure of cross-group friendship, the contact hypothesis is strongly confirmed: parental cross-group friendship was indeed significantly related to parental anti-immigrant prejudice (Figure 2). Also, the relation between the anti-immigrant prejudice of the parents and the children is significant and strong. As such, the first hypothesis can clearly be confirmed: parental cross-group friendship is indirectly related to the adolescents' anti-immigrant prejudice via parent-child attitude similarity.

Additionally, the second hypothesis predicted that the relationship between parental cross-group friendship and adolescent anti-immigrant prejudice could be mediated by parent-child similarity in cross-group friendships as well (H2). Even when controlling for the socio-economic background and classroom diversity of the adolescents, although small, significant parent-child similarity in cross-group friendship was found (Figure 2). It can be confirmed that cross-group friendship experiences are transferred within families as well. Also, adolescents with cross-group friends have lower levels of anti-immigrant prejudice than adolescents without cross-group friends. Combining these observations, it can be concluded that parental cross-group friendship is related to adolescents' prejudice via cross-group friendship similarity.

Figure 2. Empirical model parent-child similarity in prejudice and cross-group friendship

Note. Full model in Table 2. Measurement model and control variables are included in model but not visualized. M = Estimates for mother, F = Estimates for father. Unstandardized coefficients B (Standard errors, SE) *Standardized coefficients*  $\beta$ . All parameters significant at  $p < .001$ . Dotted line represent non-significant relationship. Source: PCSS 2012



With regard to the control variables, adolescent boys, and adolescents in technical education are less tolerant than adolescent girls, and adolescents in general education, confirming previous research (Hooghe et al., 2012) (see Table 2). Surprisingly, no significant relation was found between parental education level and adolescent anti-immigrant prejudice. Classroom diversity was positively related to the number of cross-group friends. Finally, I performed some additional tests to evaluate the moderating effects of the control variables on the parent-child similarity in anti-immigrant prejudice and cross-group friendship. Parent-child similarity in prejudice was stronger for adolescents in general education tracks ( $B_{\text{interaction-mother}} = .208$ ;  $B_{\text{interaction-father}} = .148$ ), and for adolescents with highly educated fathers ( $B_{\text{interaction-father}} = .063$ ). Also, similarity in cross-group friendships was stronger for adolescents in more diverse classrooms ( $B_{\text{interaction-mother}} = .067$ ;  $B_{\text{interaction-father}} = .191$ ).<sup>8</sup>

Taking into account the two mediating mechanisms, no significant direct relationship between parental cross-group friendship and adolescent anti-immigrant prejudice was found. Regardless the negative relationship between cross-group friendship and levels of prejudice, having parents with cross-group friends is indirectly related to the prejudice of the adolescents via attitude and cross-group friendship similarity. In other words, adolescents' prejudice is related to own intergroup experiences, but also to experiences within the family. It is concluded that while parents and children correspond in prejudice, there is also an independent and important resemblance in cross-group friendship experiences, which is indirectly related to the levels of prejudice. Finally, no significant difference was found in the correspondence with father and mother: the children are as similar to their father as to their mother.

Table 2. Mediating model of parental cross-group friendship and anti-immigrant prejudice child



	Anti-immigrant prejudice child					
	Mother			Father		
	B	SE	$\beta$	B	SE	$\beta$
Cross-group friendship parent	.012ns	(.014)	.022	.016ns	(.012)	.032
Cross-group friendship child ON Cross-group friendship parent	.103***	(.024)	.102	.087***	(.022)	.090
Cross-group friendship child	-.090***	(.013)	-.172	-.084***	(.013)	-.164
Anti-immigrant prejudice parent	.455***	(.043)	.352	.359***	(.035)	.329
Anti-immigrant prejudice parent ON Cross-group friendship parent	-.107***	(.011)	-.252	-.107***	(.012)	-.234
Cross-group friendship child ON Anti-immigrant prejudice parent	.029ns	(.065)	.012	-.069ns	(.054)	-.033
Total effect						
Cross-group friendship parent	-.046***	(.014)	-.083	-.029*	(.013)	-.059
Indirect effect						
Cross-group friendship parent → Cross-group friendship child	-.009***	(.003)	-.017	-.007**	(.002)	-.015
Cross-group friendship parent → Anti-immigrant prejudice parent	-.049***	(.006)	-.089	-.038***	(.005)	-.077
Female	-.255***	(.024)	-.274	-.255***	(.024)	-.279
Technical education <sup>b</sup>	.067*	(.026)	.069	.072**	(.026)	.075
Artistic education <sup>b</sup>	-.039ns	(.088)	-.011	-.081ns	(.086)	-.022
Vocational education <sup>b</sup>	.080 <sup>a</sup>	(.041)	.052	.067 <sup>a</sup>	(.040)	.044
Education level parent	-.009ns	(.014)	-.018	-.008ns	(.012)	-.017
Cross-group friendship child ON Diversity classroom	.288***	(.022)	.309	.290***	(.022)	.313
Anti-immigrant prejudice parent ON Education level parent	-.126***	(.011)	-.315	-.120***	(.011)	-.299
X <sup>2</sup> (df)	624 (224)			724 (225)		
RMSEA	.033			.036		
CFI/TLI	.966/.961			.958/.952		
N	1,664			1,671		
R <sup>2</sup>	25.3%			23.5%		

Note. Unstandardized coefficients (B), standard errors (SE) and standardized coefficients ( $\beta$ ). Entries based on structural and measurement model (see Figure B.1 in Appendix B). Correlations between the items with modification indices >100 were allowed in the measurement model.<sup>5</sup> <sup>b</sup> General education is reference category. Ns=non-significant. <sup>a</sup> p<0.1; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001. Source: PCSS 2012.

### 5. Discussion

The aim of this article was to investigate the relation between parental cross-group friendship experience and the adolescent's anti-immigrant prejudice. In order to understand the interplay between parent-child attitude and friendship similarity, two different mediating mechanisms were analyzed, each time controlling for the socio-economic and cultural background of the family: (1) parent-child similarity in anti-immigrant prejudice; (2) parent-child similarity in cross-group friendship. To overcome the methodological shortcomings of previous transmission research, I made use of the PCSS (2012), a large representative survey in which over 3,000 15-year old adolescents and both parents were asked to fill in a survey on their social and political attitudes.

The present study combines two research lines by integrating the intergroup contact theory and the socialization literature on how attitudes are formed and developed. The intergroup contact literature was extended by focusing on the broader context in which contact occurs and it was argued that the family is an important aspect of this social context. Indeed, the results of this study convincingly support the claim that the family is an important socializing agent as intergroup attitudes were strongly related within the family: both anti-immigrant prejudice and cross-group friendship were significantly related between parents and children. So, while Dhont and Van Hiel (2012, p. 234) argued that “when adolescents can rely on their personal experiences with ethnic outgroup members, these experiences represent a superior basis for shaping their racial attitudes compared to their parents’ racial attitudes”, the results of the present study support the addition of parental experiences into the transmission model.

As cross-group friendship is so strongly related to tolerance, this transmission mechanism can have wide societal implications.

A correlational analysis showed that having ‘parents with outgroup friends’ is associated with less prejudice among the children. However, this relationship was completely mediated by parent-child similarity in prejudice and cross-group friendship. Simply having parents with outgroup friends is not a sufficient condition for prejudice reduction among the children. Parental cross-group friendship is, however, indirectly related to adolescents’ prejudice in two different ways. First, among the parents, friendly interactions with outgroup members are related to more tolerant attitudes toward these groups, and this tolerance, in turn, is associated with the tolerance of the children, confirming the first hypothesis. Second, having parents with cross-group friends is related to the likelihood of adolescents engaging in intergroup experiences themselves, and the number of cross-group friends is negatively related to the levels of prejudice of the adolescents. So, while parental cross-group friendship is not a direct source of prejudice reduction, parental contact may ‘open doors to future contact’ for their children (Gómez et al., p.161). However, as the data do not allow any causal assumptions, the influential mechanism can also go the other way round: children can provide cross-group contact opportunities for their parents as well (Grusec & Davidov, 2010) (see suggestions for future research).

It is concluded that prejudice formation is related within families. Children and parents do not only resemble with regard to anti-immigrant prejudice, they also discourage or encourage each other to engage in cross-group friendships. As cross-group friendships are strongly related to prejudice reduction, this indirect mechanism should not be overlooked. The similarity between parents and children, however, must not be overestimated either, as the model (including the shared socio-economic background) explained 25.2% (mother) and 23.8% (father) respectively of the variance in adolescents’ anti-immigrant prejudice, leaving room for other socializing agents (e.g. peers, media, voluntary associations), identity moderators (e.g. group membership saliency), personality moderators, and parent-child relationship indicators (Brown & Hewstone, 2005; Dhont & Van Hiel, 2012; Dinas, 2013; Hooghe & Quintelier, 2012; Pettigrew & Tropp, 2011).

Several limitations of the present study should be acknowledged. The most important limitation of this article is that it is based on a correlational analysis in a cross-sectional design. As a consequence, no causal statements can be made with regard to the directionality of the transmission effects. The only conclusion is that children and parents have similar patterns of prejudice and cross-group friendship experience. Even though previous authors like Vollebergh et al. (2001), Rodríguez-García and Wagner (2009) and Glass, Bengtson, and Dunham (1986) investigated the directionality of socialization, the field of prejudice transmission would especially benefit from representative longitudinal data sources. Second, in the literature review three mechanisms by which adolescents acquire prejudice were mentioned: social learning, conformity and intergroup experience. Empirically, it is difficult to distinguish social learning and conformity, as they both result in parent-child similarity (as measured by correlation or regression coefficients). In this paper, no attempt was made to explore this ‘black box’ between parental attitudes and adolescents’ attitude. It is not known which mechanism is responsible for the parent-child similarity. Third, it needs to be acknowledged that the measurement of cross-group friendship has its limitations as the outgroup was not specified and as self-reports of cross-group friendship were used (Pettigrew, 1997). With regard to the specification of the outgroup, the cross-group friendship question did not specify ‘immigrant friends’, but probed about the



number of 'friends with different origin'. As such, the measure assesses contact with all different types of ethnicities and captures a more general orientation of openness to diversity rather than a specific immigrant orientation. Self-reports of cross-group friendship have been criticized because respondents tend to overestimate cross-group friends for reasons of social desirability (Hewstone, Judd, & Sharp, 2011). However, self-reports are found to be as reliable as observer-reports, validating their use (Dhont et al., 2012; Hewstone et al., 2011). Finally, only complete mother-father-child triads were included in the analyses. As a consequence, single-parent families were left out of the analysis, rendering the sample somewhat less representative of the whole Flemish population. This specific sample might also explain the relatively high parent-child similarity in prejudice.

Future research could reveal the underlying causes of the intergenerational transmission process. Do children intentionally copy the attitudes and behavior of their parents, or is it an indirect transmission because of a mutual socio-economic environment? Or is parent-child similarity rather a combination of perception and persuasion as Westholm (1999) argues? Also, the reversed socialization hypothesis, i.e. children influence their parents, needs to be scrutinized further (Hughes et al. 2006). Similarly, in order to offer more contextualization, in a next step, closer attention should be paid to the moderating mechanisms reinforcing the intergenerational similarity. In future research, it would be interesting to test the generalizability of this transmission model to other forms of prejudice (e.g. prejudice toward homosexuals, Muslims, generalized prejudice etc.) and to other cultures. It has to be remembered, however, that anti-immigrant sentiments tend to be considered as more salient in Western European societies than other forms of prejudice.

In sum, this article shows that the parent-child similarity in cross-group friendship experiences should not be overlooked and needs to be included in theoretical models on prejudice development among adolescents. Cross-group friendship similarity is an important mechanism, independent of parent-child similarity in anti-immigrant prejudice and is not only found in families having stronger values of tolerance.



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## Endnotes

<sup>1</sup> Next to intergroup anxiety and perceived ingroup norms, two other mediating mechanisms – perceived outgroup norms and inclusion of the outgroup in the self – can be distinguished (Turner et al., 2008). However, with regard to the first hypothesis, the other two mechanisms are more important and therefore included in the text.

<sup>2</sup> As a consequence, findings cannot be generalized to all Belgian adolescents, but only to the Dutch-speaking Flemish adolescents.

<sup>3</sup> 68 mother-father dyads (3%) had missing values on country of birth. Also, single-parent families were excluded from the analysis (N=111).

<sup>4</sup> All analyses were replicated with a second order factor model of ‘parental anti-immigrant prejudice’ and ‘parental cross-group friendship’ as the independent variables. The results were similar. Because of model complexity, I decided to present the models for mother and father separately.

<sup>5</sup> Correlations between the items with modification indices >100 were allowed in the measurement model (see Figure B.1 in Appendix B).

Mother: correlation between ‘*Generally, it is good for the Belgian economy that people from other countries migrate to Belgium*’ and ‘*Belgium had become a better place to live thank to the migration of immigrants*’; correlation between ‘*If a country wants to reduce tensions, it should stop immigration*’ and ‘*The presence of too many immigrants is a threat to our way of life*’.

Father & Child: correlation between ‘*Generally, it is good for the Belgian economy that people from other countries migrate to Belgium*’ and ‘*Belgium had become a better place to live thank to the migration of immigrants*’.

<sup>6</sup> General education is theory-oriented and prepares for higher education or university. Technical education combines theory with practice. Artistic education develops artistic skills. Vocational education prepares students for a specific job.

<sup>7</sup> I also generated models including a measure for school diversity at the school-level (second level) in a hierarchical model. This variable was constructed as the percentage of non-Dutch speaking pupils per school. Because no differences were found between the hierarchical model and the single-level model, I decided to present the single-level model because of its simplicity in interpretation. Results for the multilevel path model can be requested from the author.

<sup>8</sup> Full analysis results of the interaction effects can be requested from the author.

## Appendix A

Table A.1 Descriptive statistics and Pearson correlations for control variables

	Mean (SD)	Range	N	Adolescent anti-immigrant prejudice	Adolescent cross-group friendship
Gender (1=Female)	.46 (.50)	0-1	1,705	-.250***	.017ns
General education	.53 (.50)	0-1	1,708	-.160***	-.122***
Technical education	.35 (.48)	0-1	1,708	.157***	-.008ns
Artistic education	.02 (.12)	0-1	1,708	-.073**	.113***
Vocational education	.10 (.30)	0-1	1,708	.043ns	.150***
Education level mother	3.53 (.90)	1-5	1,688	-.151***	-.083***
Education level father	3.43 (1.04)	1-5	1,692	-.137***	-.104***
Classroom diversity	1.87 (.88)	1-4	1,697	-.037ns	.314***

Note. Pearson correlations based on measurement model of anti-immigrant prejudice. Ns=non-significant. \*p<.05; \*\*p<.01; \*\*\*p<.001. Source: PCSS 2012



Appendix B

Figure B.1 Structural and measurement model the relation between cross-group friendship mother (fmoth) and anti-immigrant prejudice child (prej\_child) (Unstandardized estimates of model in Table 2)

